

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/664,958	KOIBUCHI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	William W. Moore	1656	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 28 December 2005 and the interview of 10 March 2006.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

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## EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Cancel claims 10 and 11.

Amend claims 1-3, 5-7, and 9 thus:

1. (Amended) An isolated protein selected from the group consisting of
  - (i) a protein comprising the ~~having an~~ amino acid sequence of SEQ ID NO:5, and
  - (ii) a protein wherein the ~~having an~~ amino acid sequence of ~~corresponding to~~ SEQ ID NO:5 comprises a substitution, or deletion, or insertion of no more than ten ~~wherein one to 170 amino acids are substituted, deleted, or inserted and which~~ protein retains the ~~has an~~ activity of catalyzing the reaction for liberating an amino acid at an N-terminal of a peptide.
2. (Amended) An isolated polynucleotide encoding a protein selected from the group consisting of
  - (i) a protein comprising the ~~having an~~ amino acid sequence of SEQ ID NO:5, and
  - (ii) a protein wherein the ~~having an~~ amino acid sequence of ~~corresponding to~~ SEQ ID NO:5 comprises a substitution, or deletion, or insertion of no more than ten ~~wherein one to 170 amino acids are substituted, deleted, or inserted and which~~ protein retains the ~~has an~~ activity of catalyzing the hydrolysis of ~~reaction for~~ releasing an amino acid from the ~~at an~~ N-terminal of a peptide.
3. (Amended) The isolated polynucleotide according to claim 2, which is selected from ~~form~~ the group consisting of

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- (i) a DNA ~~comprising the having a nucleotide~~ sequence of ~~nucleotides nucleotide~~ from position ~~Nos.~~ 73 to position 1602 set forth in ~~the nucleotide sequence shown in~~ SEQ ID NO:4, and
- (ii) a DNA that hybridizes with the DNA of clause ~~as defined in~~ (i) under stringent conditions and that encodes a protein having the an activity of catalyzing the hydrolysis of reaction for releasing an amino acid from the N-terminal of a peptide, wherein said stringent conditions comprise ~~includes~~ a washing step at 60°C in 1 x SSC and 0.1% SDS.
5. (Amended) A recombinant polynucleotide that comprises ~~containing~~ the polynucleotide according to claim 2.
6. (Amended) An isolated transformed microorganism host cell that comprises ~~containing~~ the polynucleotide according to claim 2 in a form that can be expressed.
7. (Amended) The isolated transformed microorganism host cell according to claim 6, which is a filamentous fungus, a yeast, or an Escherichia bacterium.
9. (Amended) An isolated Aspergillus oryzae aminopeptidase having each of the following properties ~~1) to 8)~~:
- 1) hydrolyzing a peptide or protein having leucine or methionine at the N-terminal to release leucine or methionine;
  - 2) having an optimum pH of 7.0 to 7.5;
  - 3) having an optimum temperature of 37°C to 45°C;
  - 4) having a remaining activity of at least 80% even at a sodium chloride concentration of 3M, with the activity thereof in the absence of sodium chloride being defined as 100%;
  - 5) having a remaining activity of at least 80% after ~~the~~ storage in the presence of 3M ~~of~~ sodium chloride at 0°C for 24 hours, with the activity thereof after ~~the~~ storage

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in the absence of sodium chloride at 0°C for 24 hours being defined as 100%;

6) having a remaining activity of at least 60% after ~~the~~ storage at pH 5.8 to 9.5 at 0°C for 24 hours, with the activity thereof after ~~the~~ storage at pH 7.5 at 0°C for 24 hours being defined as 100%;

7) having a molecular weight of 550 kD as measured on a native PAGE gel and a molecular weight of 22 or 33 kD as measured on a SDS-PAGE gel after reducing and heating said protein; and,

8) requiring cobalt ion or zinc ion for being activated.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Vincent K. Shier on 10 March 2006.

The following is an examiner's statement of reasons for allowance:

Applicant's amendments to the claims overcome the rejections of record of claims herein under 35 U.S.C. §§ 101, 102, and 112, second paragraph, that were stated in the communication mailed 29 September 2005. The examiner's amendment above clarifies the recitations of claims 1-3, 5-7 and 9 by providing recitations in the standard English terms used in the art and ensures that the claims avoid the rejections of record stated under the first paragraph of 35 U.S.C. § 112 in the communication of 29 September 2005, permitting the allowance of claims 1-9 herewith.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

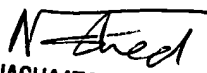
#### *Conclusion*

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to William W. Moore whose telephone number is 571.272.0933 and whose FAX number is 571.273.0933. The examiner can normally be reached Monday through Friday between 9:00AM and 5:30PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisory Primary Examiner, Dr. Kathleen Kerr, can be reached at 571.272.0931. The official FAX number for all communications for the organization where this application or proceeding is assigned is 571.273.8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571.272.1600.

William W. Moore  
10 March 2006

  
NASHAAT T. NASHED PHD.  
PRIMARY EXAMINER